

IN THE CLAIMS:

Please cancel currently pending Claims 1, 3, 8, 10, 15, and 17 without prejudice.

1 1. (Cancelled)

1 2. (Previously Cancelled)

1 3. (Cancelled)

1 4. (Currently Amended) A system for sensing the presence of tailings in a combine,

2 comprising:

3 a tailings sensor configured to generate a signal indicative of a flow rate of

4 tailings;

5 a first microcontroller module coupled to the tailings sensor and configured to

6 receive the signal and filter it by clipping transient excursion noise, The system of claim

7 3, wherein the first module is configured to notch filter the signal at a natural frequency

8 of the tailings auger and to clip positive-going sensor signal excursions, and wherein the

9 sensor is disposed adjacent a laterally-extending tailings auger between adjacent

10 sidewalls of the combine; and

11 a second microcontroller module configured to receive the filtered signal and

12 display it.

1 5. (Original) The system of claim 4, wherein the first module is configured to low-

2 pass filter the clipped sensor signal.

1 6. (Original) The system of claim 5, wherein the second module is configured to

2 display the low-pass filtered signal.

- 1 7. (Original) The system of claim 4, wherein the first module is configured to
2 digitally identify local minima of successive sensor signal samples.
- 1 8. (Cancelled)
- 1 9. (Previously Cancelled)
- 1 10. (Cancelled)
- 1 11. (Currently Amended) A method of sensing the presence of tailings in a combine,
2 comprising the steps of:
3 detecting a flow of tailings in a laterally-extending tailings auger with a tailings
4 sensor that is adjacent to the tailings auger and between adjacent sidewalls of the
5 combine;
6 generating a signal indicative of the flow;
7 filtering the signal to clip transient excursion noise; and
8 displaying the filtered signal. ~~The method of claim 10,~~ wherein the step of
9 filtering the signal includes the steps of:
10 notch filtering the signal at a natural frequency of the tailings auger; and
11 clipping positive-going sensor signal excursions.
- 1 12. (Original) The method of claim 11, wherein the step of filtering further includes
2 the step of low-pass filtering the clipped sensor signal.
- 1 13. (Original) The method of claim 12, further comprising the step of displaying the
2 low-pass filtered signal.

1 14. (Currently Amended) A method of sensing the presence of tailings in a combine,
2 comprising the steps of:
3 detecting a flow of tailings in a laterally-extending tailings auger with a tailings
4 sensor that is adjacent to the tailings auger and between adjacent sidewalls of the
5 combine;
6 generating a signal indicative of the flow; and
7 filtering the signal to clip transient excursion noise. ~~The system of claim 8,~~
8 wherein the step of filtering includes the step of digitally identifying local minima of
9 successive sensor signal samples.

1 15. (Cancelled)

1 16. (Previously Cancelled)

1 17. (Cancelled)

1 18. A system for sensing the presence of tailings in a combine, comprising:
2 means for generating a signal indicative of a flow rate of tailings disposed
3 adjacent to a laterally-extending tailings auger between adjacent sidewalls of the
4 combine;
5 a first microcontroller means for receiving the signal and for filtering it by
6 clipping transient excursion noise. ~~The system of claim 17,~~ wherein the first
7 microcontroller means includes means for notch filtering the signal at a natural frequency
8 of the tailings conveyor and means for clipping positive-going sensor signal excursions;
9 and
10 a second microcontroller means for receiving the filtered signal and displaying it.

- 1 19. (Original) The system of claim 18, wherein the first microcontroller means
2 includes means for low-pass filtering the clipped sensor signal.
- 1 20. (Original) The system of claim 19, wherein the second microcontroller means
2 includes means for displaying the low-pass filtered signal.
- 1 21. (Original) The system of claim 18, wherein the first microcontroller means
2 includes means for digitally identifying local minima of successive sensor signal samples.